

Esame's Guy

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TI Surface treatment of endless steel belt  
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AB The endless belt of **maraging** steel for automotive transmission is preferentially plastic-deformed on its outer surface and then soft **nitrided** to induce a high **residual** compression stress for increasing the bending fatigue strength. In 1.0-8.0% plastic deforming, the belt is tensioned between 2 spaced rollers of given size for a bending strain of more than twice the max. bending strain of the belt in service. Thus, a weld-joined belt of **maraging** steel band of 250-kpsi grade was soln.-treated at .apprx.800.degree., expansion-worked for 1.0%, and soft **nitrided**. The product with the max. bending stress of .apprx.118 kg/mm2 lasted .apprx.107 cycles in service.